

**Chronic Disease: Opportunities for Collaboration**  
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# **Oral Health and Chronic Disease: What's New?**

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# Benefits of Collaboration

- Expanded workforce for intervention
- Prevention
- Early detection
- Interdisciplinary management
- Reduced cost
- Improved health outcomes/quality of life

# Recent Oral Health and Systemic Disease Studies

- Cardiovascular disease
- Diabetes mellitus
- Obesity
- Osteoporosis
- Respiratory diseases
- Adverse pregnancy outcomes
- Malnutrition and Iron Deficiency

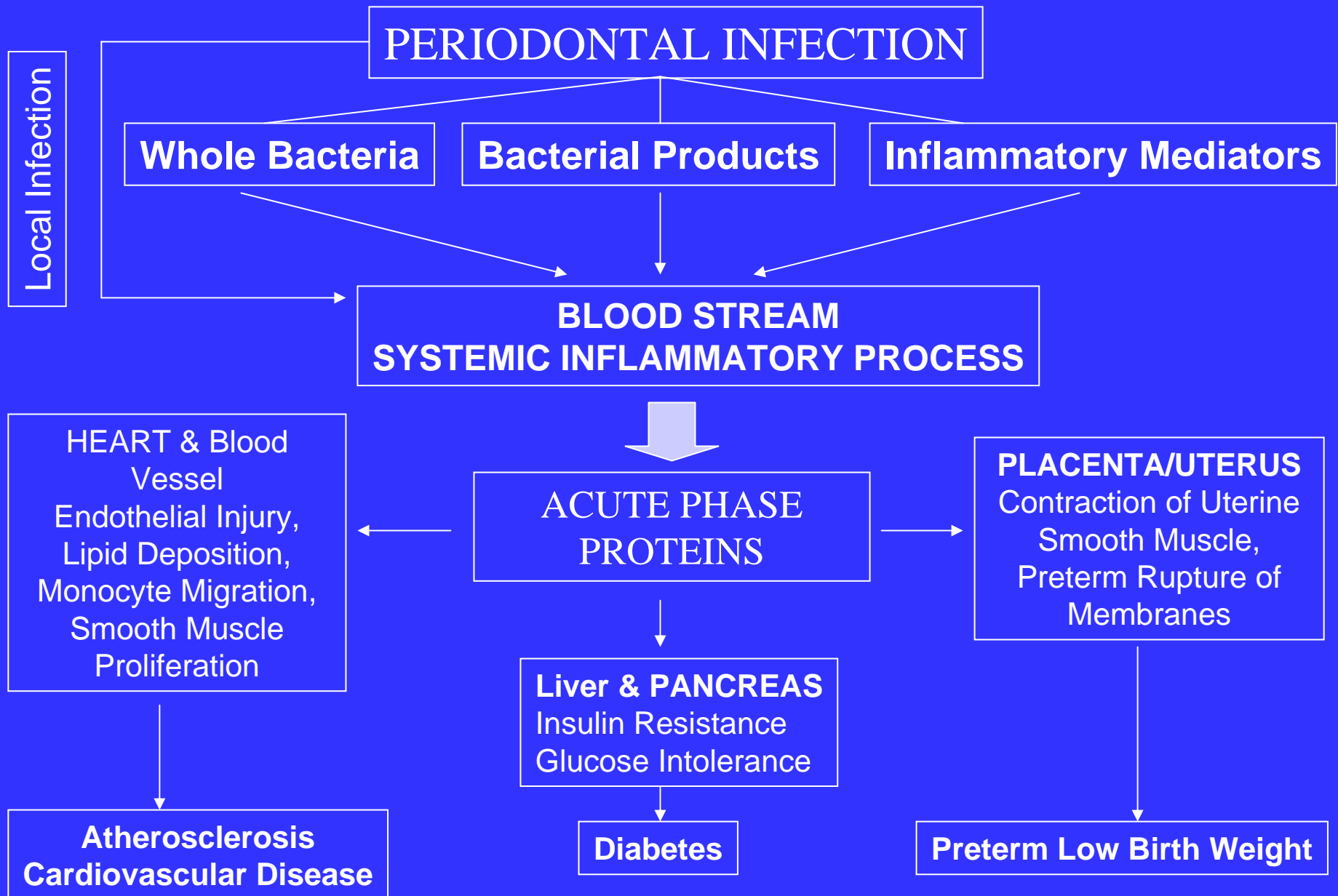
# Periodontal Infection and Cardiovascular Disease

- *In vitro* and animal studies relate inflammatory role
- Oral pathogens in blood stream may induce inflammatory and immune response and lead to the inflammatory component of atherosclerosis
- E.g. *P. gingivalis* could contribute by :
  - ◆ Platelet activation and aggregation,
  - ◆ Increase in serum lipids
  - ◆ Induction of pro-inflammatory mediators
- Periodontal disease should be considered a moderate risk factor for CVD although still controversial.

# Periodontal Disease and Diabetes Mellitus

- Formerly unidirectional now **bidirectional** periodontal disease exacerbating diabetic complications and glycemic control.
- E.g. Type 2 diabetics were 6x more likely to have poor glycemic control for two years than those without severe periodontitis.
- **Hypothesis** : Chronic low level inflammation results in a cascade of increased cytokine production, activated acute phase protein synthesis and consequent insulin resistance, resulting Type 2 diabetes.
- **Conclusion** : Treating periodontal disease in diabetic patients is clearly an important component in maintaining oral health and may even play a role in glycemic control.

# PROPOSED PERIODONTAL-SYSTEMIC CONNECTIONS



# Reduced Cost by Providing Dental Preventive Services

## ■ Aetna- Columbia University 144,000 insured

<u>History of</u>	<u>Reduced Medical Costs</u>
◆ Diabetes	9%
◆ Coronary Artery Disease	16%
◆ Cerebrovascular Disease	11%

- Cigna, and Blue Cross Blue Shield of Michigan  
Washington Dental Service, Costco, MetLife Inc.  
Kellogg Co., Ford Motor Co.

# Recommendations

- Assume a collaborative world view
- Develop strategic partnerships
- Adopt shared goals and tangible objectives
- Educate stakeholders
- Mobilize leadership
- Develop resources



What's one *catalytic* thing you could do?